

Appl. No.: 09/941,391
Amdt. dated: December 26, 2003
Reply dated: June 24, 2004

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1 (previously withdrawn). A sensor for sensing precursor seismic activity comprising a sensor including at least one wire arranged in a pattern that results in a decreased net electromagnetic reaction than would result from said at least one wire aligned in substantially co-linear loops from an electromagnetic source external to said sensor.

2 (previously withdrawn). The sensor of claim 1 wherein said at least one wire is said arranged in a looped manner.

3 (previously withdrawn). The sensor of claim 1 wherein said wire is arranged in a pattern wherein the wire has a plurality of co-linearly aligned portions having opposing electromagnetic fields.

4 (previously withdrawn). The sensor of claim 3 wherein a plurality of said portions are each less than five percent of the total length of said wire.

5 (previously withdrawn). The sensor of claim 3 wherein said pattern includes at least one twisted pair of adjacent said at least one wire.

6 (previously withdrawn). The sensor of claim 1 wherein said at least one wire is arranged in a manner such that a major portion of the length of said at least one wire is not substantially parallel to said at least one wire.

7 (previously withdrawn). A sensor for sensing precursor seismic activity comprising a sensor including at least one wire arranged in a first pattern having a first

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resistance and said at least one wire arranged in a second pattern having a second resistance, wherein said first resistance is less than said second resistance.

8 (previously withdrawn). The sensor of claim 7 wherein said at least one wire of said first pattern is arranged in a pattern that results in a decreased net electromagnetic reaction than would result from said at least one wire aligned in substantially co-linear loops from an electromagnetic source external to said sensor.

9 (previously withdrawn). The sensor of claim 8 wherein said at least one wire of said second pattern is arranged in a pattern of co-linear loops.

10 (previously withdrawn). The sensor of claim 7 wherein said first pattern has a smaller average diameter than the average diameter of said second pattern.

11 (previously withdrawn). The sensor of claim 7 wherein said first pattern and said second pattern are electrically connected in parallel to each other.

12 (previously withdrawn). A method of detecting precursor seismic activity comprising:

- (a) imposing a first signal across a conductive material as a result of sensing said precursor seismic activity;
- (b) sensing a second signal across said conductive material at a location spaced apart from the location of said imposing of said first signal.

13 (previously withdrawn). The method of claim 12 wherein said conductive material is interconnected to a uniform potential.

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14 (previously withdrawn). The method of claim 13 wherein said potential is ground.

15 (previously withdrawn). The method of claim 12 wherein said imposing and said sensing and said imposing are substantially symmetrically connected to said conductive material.

16 (previously withdrawn). A method of detecting a fault comprising sensing precursor seismic activity with a moving sensor by determining significant changes in statistical variations of a signal from said sensor.

17 (previously withdrawn). The method of claim 16 wherein said significant change is ringing.

18 (amended twice). A method of determining the general latitude of a fault within the earth with a sensor comprising associating a frequency component of at least one of electrical and magnetic signal coming from said fault sensed by said sensor with said general latitude of said fault, wherein ~~said sensor is not proximate to said fault~~ said general latitude of said fault is different than the general latitude of said sensor.

19 (original). The method of claim 18 wherein said signal is a ringing.

20 (original). The method of claim 18 wherein said frequency is the general predominant frequency of said signal.